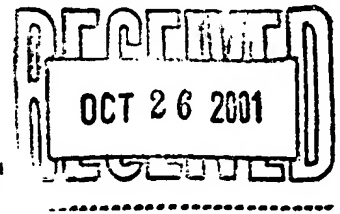


PATENT COOPERATION TREATY



From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To: JANE MASSEY LICATA
LICATA & TYRRELL P.C.
66 E. MAIN STREET
MARLTON, NJ 08053

NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Patent System ☒
Index Report ☒
Pocket Book ☒
NP = 2/19/02

Date of Mailing
(day/month/year) **23 OCT 2001**

Applicant's or agent's file reference
PENN-0723

IMPORTANT NOTIFICATION

International application No.
PCT/US00/21789

International filing date (day/month/year)
10 AUGUST 2000

Priority Date (day/month/year)
19 AUGUST 1999

Applicant
THE TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

DEBORAH CROUCH, P.H.D.

Telephone No. (703) 305-0190

PATENT COOPERATION TREATY


PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

| | | |
|---|--|--|
| Applicant's or agent's file reference PENN-0723 | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/US00/21789 | International filing date (day/month/year) 10 AUGUST 2000 | Priority date (day/month/year) 19 AUGUST 1999 |
| International Patent Classification (IPC) or national classification and IPC IPC(7): G01N 33/53; C12N 9/00; A61K 38/00 and US Cl.: 435/7.1, 163+, 514/12 | | |
| Applicant THE TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA | | |

| |
|--|
| <p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>2</u> sheets.</p> <p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of report with regard to novelty, inventive step or industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability, citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application |
|--|

| | |
|--|---|
| Date of submission of the demand 16 MARCH 2001 | Date of completion of this report 05 SEPTEMBER 2001 |
| Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 | Authorized officer  DEBORAH CROUCH, PH.D. |
| Facsimile No. (703) 305-3230 | Telephone No. (703) 308-0196 |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/21789

I. Basis of the report

1. With regard to the elements of the international application:*

☐ the international application as originally filed☒ the description:

pages (See Attached)

, as originally filed

pages , filed with the demand

pages , filed with the letter of

☒ the claims:

pages (See Attached)

, as originally filed

pages , as amended (together with any statement) under Article 19

pages , filed with the demand

pages , filed with the letter of

☒ the drawings:

pages (See Attached)

, as originally filed

pages , filed with the demand

pages , filed with the letter of

☒ the sequence listing part of the description:

pages (See Attached)

, as originally filed

pages , filed with the demand

pages , filed with the letter of

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).☐ the language of publication of the international application (under Rule 48.3(b)).☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in printed form.☐ filed together with the international application in computer readable form.☐ furnished subsequently to this Authority in written form.☐ furnished subsequently to this Authority in computer readable form.☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4. ☒ The amendments have resulted in the cancellation of:☒ the description, pages NONE☒ the claims, Nos. NONE☒ the drawings, sheets/fig. NONE5. ☐ This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

**Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/21789

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability, citations and explanations supporting such statement

1. statement

| | | | |
|-------------------------------|--------|-------------|-----|
| Novelty (N) | Claims | <u>1-10</u> | YES |
| | Claims | <u>NONE</u> | NO |
| Inventive Step (IS) | Claims | <u>1-10</u> | YES |
| | Claims | <u>NONE</u> | NO |
| Industrial Applicability (IA) | Claims | <u>1-10</u> | YES |
| | Claims | <u>NONE</u> | NO |

2. citations and explanations (Rule 70.7)

Claims 1-10 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest a composition comprising mutant of cyclophilin B or an inhibitor of the interaction of cyclophilin B with a somatotactogenic hormone, or that cyclophilin B interacts with the somatotactogenic hormones prolactin and growth hormone.

Claims 1-10 meet the criteria set out in PCT Article 33(4) for industrial applicability.

Applicant's amendments of 09 August 2001, have overcome the objections stated in the 408 mailed 12 June 2001.

_____ NEW CITATIONS _____

NONE

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/21789

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

I. BASIS OF REPORT:

This report has been drawn on the basis of the description,
page(s) 1-13, as originally filed.
page(s) NONE, filed with the demand.
and additional amendments:
NONE

This report has been drawn on the basis of the claims,
page(s) NONE, as originally filed.
page(s) NONE, as amended under Article 19.
page(s) NONE, filed with the demand.
and additional amendments:
Pages 14 and 15, filed with the letter of 09 August 2001.

This report has been drawn on the basis of the drawings,
page(s) NONE, as originally filed.
page(s) NONE, filed with the demand.
and additional amendments:
NONE

This report has been drawn on the basis of the sequence listing part of the description:
page(s) NONE, as originally filed.
pages(s) NONE, filed with the demand.
and additional amendments:
NONE

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/21789

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01N 33/53; C12N 9/00; A61K 38/00

US CL : 435/7.1, 183+; 514/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/7.1, 183+; 514/12

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WEST; CAPLUS; BIOSIS; EMBASE; MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| Y | PRICE et al. Human Cyclophilin B: A Second Cyclophilin Gene Encodes a Peptidyl-Prolyl Isomerase with a Signal Sequence. Proc. Natl. Acad. Sci. (USA). March 1991, Vol. 88, pages 1903-1907, see especially pages 1906-1907. | 1-10 |
| Y | ALLAIN et al. Characterization of Surface Binding Sites for Cyclophilin B on a Human Tumor T-Cell Line. Journal of Biological Chemistry. 17 June 1994, Vol. 269, No. 24, pages 16537-16540, see especially page 16540. | 1-10 |

BEST AVAILABLE COPY

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

| | | |
|---|-----|--|
| * Special categories of cited documents: | *T | later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention |
| *A* document defining the general state of the art which is not considered to be of particular relevance | *X | document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone |
| *B* earlier document published on or after the international filing date | *Y | document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |
| *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | *A* | document member of the same patent family |
| *O* document referring to an oral disclosure, use, exhibition or other means | | |
| *P* document published prior to the international filing date but later than the priority date claimed | | |

Date of the actual completion of the international search

10 SEPTEMBER 2000

Date of mailing of the international search report

22 SEP 2000

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

DEBORAH CROUCH, PH.D.

Telephone No. (703) 308-0196

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/21789

| C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|---|--|-----------------------|
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| Y | MERTANI et al. Cellular Expression of Growth Hormone and Prolactin Receptors in Human Breast Disorders. International Journal of Cancer. 1998, Vol. 79, pages 202-211, especially pages 207-209. | 1-10 |
| Y | MARILLER et al. Involvement of the N-Terminal Part of Cyclophilin B in the Interaction with Specific Jurkat T-Cell Binding Sites. Biochemical Journal. 1996, Vol. 317, pages 571-576, see especially pages 575-576. | 1-10 |
| Y | DENYS et al. Involvement of Two Classes of Binding Sites in the Interactions of Cyclophilin B with Peripheral Blood T-Lymphocytes. Biochemical Journal. 1998, Vol. 336, pages 689-697, see especially pages 695-696. | 1-10 |
| Y | DENYS, A. et al. Distribution of Cyclophilin B-Binding Sites in the Subsets of Human Peripheral Blood Lymphocytes. Immunology. 1997, Vol. 91, 609-617, see especially pages 614-616. | 9 and 10 |
| Y | ALLAIN et al. Selective Assay for CyPA and CyPB in Human Blood using Highly Specific Anti-Peptide Antibodies. Journal of Immunological Methods. 1995, Vol. 178, pages 113-120, see especially pages 118 and 119. | 9 and 10 |
| Y | PRICE et al. Cyclophilin B Trafficking through the Secretory Pathway is Altered by Binding of Cyclosporin A. Proc. Natl. Acad. Sci. (USA). April 1994, Vol. 91, pages 3931-3935, see especially pages 3934 and 3935. | 1-10 |
| Y | US 5,523,227 A (BRAM et al) 04 June 1996, col. 5, lines 63-676, col. 6, line 66 to 67, and col. 8, lines 33-36 55-63. | 1-10 |
| BEST AVAILABLE COPY | | |

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

POPLAWSKI, Edward, G.
Sidley & Austin
555 West Fifth Street
Los Angeles, CA 90013-1010
ETATS-UNIS D'AMERIQUE

| | |
|--|---|
| Date of mailing (day/month/year) 23 April 2001 (23.04.01) | IMPORTANT NOTIFICATION |
| Applicant's or agent's file reference PENN-0723 | |
| International application No. [REDACTED] | International filing date (day/month/year) 10 August 2000 (10.08.00) |

1. The following indications appeared on record concerning:

☐ the applicant ☐ the inventor ☒ the agent ☐ the common representative

Name and Address

LICATA, Jane, Massey
Law Offices of Jane Massey Licata
66 E. Main Street
Marlton, NJ 08053
United States of America

State of Nationality

State of Residence

Telephone No.

(866)810-1515

Facsimile No.

(866)810-1454

Teleprinter No.

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☒ the person ☐ the name ☐ the address ☐ the nationality ☐ the residence

Name and Address

POPLAWSKI, Edward, G.
Sidley & Austin
555 West Fifth Street
Los Angeles, CA 90013-1010
United States of America

State of Nationality

State of Residence

Telephone No.

213/896-6601

Facsimile No.

213/896-6600

Teleprinter No.

3. Further observations, if necessary:

A power of attorney appointing the new agent is required for further action.

4. A copy of this notification has been sent to:

| | |
|--|--|
| <input checked="" type="checkbox"/> the receiving Office | <input checked="" type="checkbox"/> the designated Offices concerned |
| <input type="checkbox"/> the International Searching Authority | <input type="checkbox"/> the elected Offices concerned |
| <input type="checkbox"/> the International Preliminary Examining Authority | <input type="checkbox"/> other: |

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Y. KUWAHARA

Telephone No.: (41-22) 338.83.38